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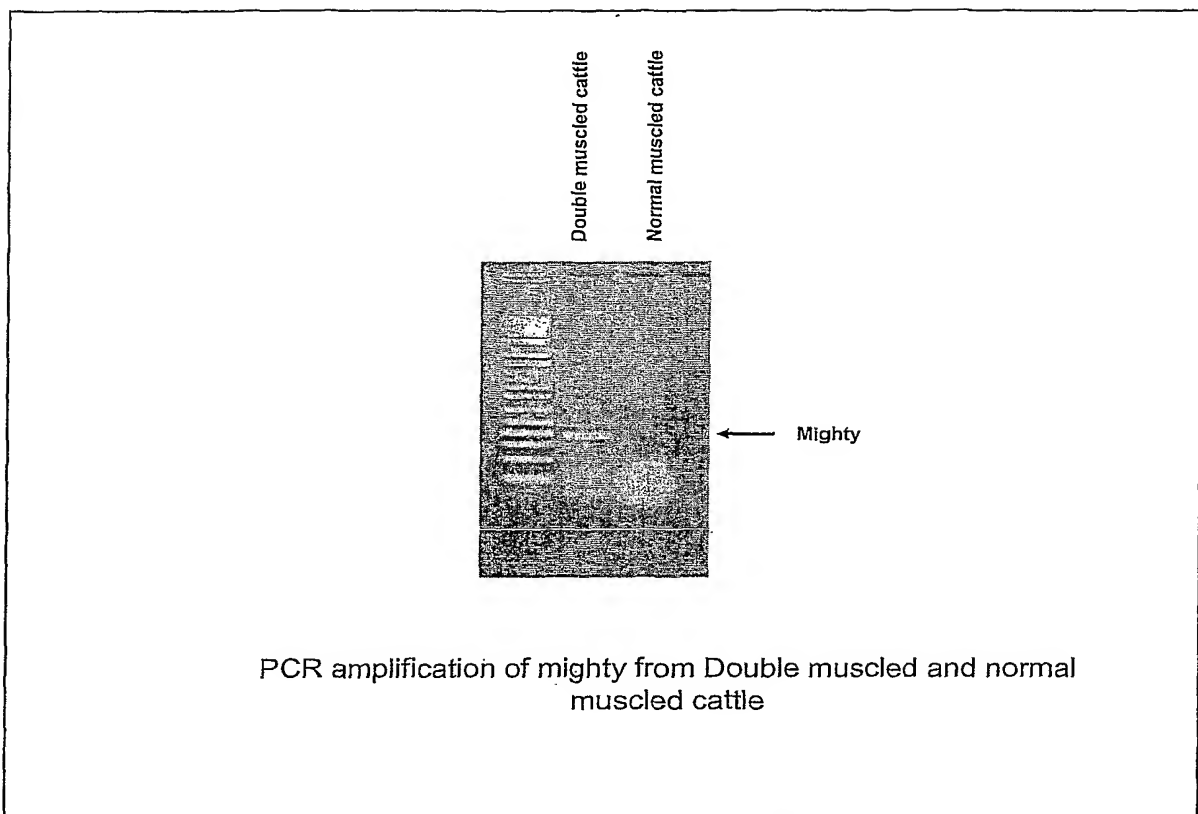
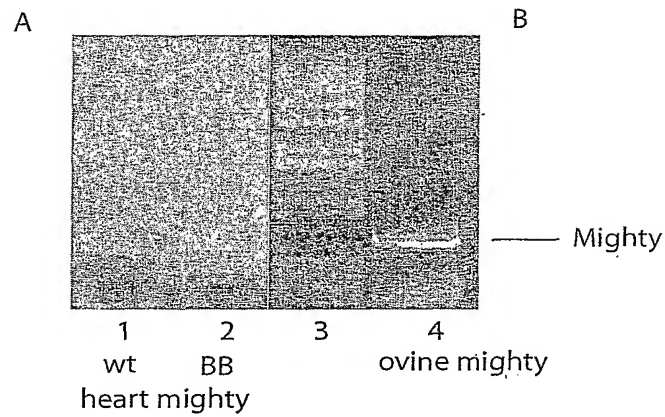


FIGURE 1

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Lane 1 PCR amplification of mighty from wild type bovine heart  
Lane 2 PCR amplification of mighty from Belgian Blue bovine heart  
Lane 3 1 kb plus DNA ladder  
Lane 4 PCR amplification of mighty from ovine skeletal muscle

**FIGURE 2**

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CCACATTCACTGTGCAAGTCGTGGGGAAATACAGATGAATAAAGGCTTCCTTGTTATTCTCAAGGAATGTATG  
 GTTTTGAAGCACAGTTAGACATATATTCAAATTACAGCTTCCTCCTTTAAACACTAATATTCCAAGGCACAC  
 TCAATGTTTTAAAGGATCACAGAGTGACTACCAAAGCACGTAGCAAAACCCTACTAAGAGAGGTGTGTTTTAA  
 ATGACTACCCAAGGGACATACTTTTCAAGTCTTCTAATCGTTCACTTTGGATCTGTTTATACCACAAGAAAAC  
 AATTTACTTGATGCTCTTAGGTCCCTTAAAAAATAAGCATCGTGAAGTGGCTTTTCATGTCTTGGCTTTTA  
 TTGAACATAGAAACAGCCATGCAAGCGGTCTTAAAGGCTT TATTACATCATTGTTTTCCTAATAAAGTCAT  
 GACAGTCTACCTTTGGAATTAAAGTGATACACAAAATGATGGTCTGTGTCCTCTGGTGAAGTGGTTCCATTC  
 CATATGACCTATTTCATCATGACTATGGTTTCATTTTCTTTAGCCTTCAAGAAGCTCAGAAGTGAATTTTAA  
 TTCAGTCATTTACCACCAACATAAATTCAGAGTTTTTTTTTTTTTAAAAAACTCTAATGTTTTATTCTAGATT  
 TTAGTTTAAACCACGTTACATCTATATTGACAATAAATGTGCTAAAATAAACTTAACATGGGTAATGTGCCTA  
 GGGAGGCTTGAATCCCAATATGGCAAAACAAACAGAAAACCAGCAATTTGGTATGCTGTGCTGTCTTATATTT  
 TACAGAAATAAATGTGAAAGTATATGACCTATGTTATGATCTTTAAAGAGTTTGTAGAAACGGAAGAGGACTC  
 AGAGAAAAGCAACCAAAACGAACAGGAGGAGAAGGAAGAAGAGGCGGAGAAGGAGGAGCAACATTCGCGATAC  
 ATGCGCTTTATTGTCTAACCCCAAGTGTGTTGAAGTACTGTGACACCGATCTTCGCAATTAGAAATGAGTAT  
 CTAATAATTTGGACTGTTCTAGAAAAATCTGTTACAGAGATAATGTTAAAGCCAGATTACAGGAATCACAGCCA  
 CTAATATACAAATAATTACAGAAAGGCTTTGAATGTGGAGGTGTTGTTCTGATGACTCTATTGATGTATTTGA  
 AAGCACTGGAGTTACTCCCCAGGAAAATTACAACCAGAGTTCCCTAAAGCAGAACCTCCCTGTTTTCTATTCA  
 TTTGCTGAATATCAAAAGCATTTTCCAGCCAACAGTACGGCAGACATCTTCATTGACCCGAGGAAGAACCAG  
 TCTGAGTTGCCAAGTCCGATGAGGAAGCCAATCGCAATTCAGCTATCAGGGGAAGTTCCTAACACCCTGGTA  
 TCACTTGGTTAGACAGTTTAAGCCAGTGAGTTTTCTGGTAGGATTGTTTTTTGGTTTTTTTTTTTCTTTTA  
 ATCCTTTTTTGCCTAACACATATCCATTTAGTGATCCGATTAATGGCCGGGTCTGCTATGCGGAAAAATACATT  
 CATTGTGAACACACCTCCCCCTCCAATTTTGGCCATCATTCGACAGGGTTCGTGGATTAAATAAAGTCTATCC  
 TTAGATAACCCGTTATGTTTGTGAAGATTCTCTGGGACTCAAGACAAAATCCTTTGATAACCCTTACGATTC  
 AGCTCTTTTATCGGTACGCGGCCAAGGGAACCCGGGTCTCCAGGGTCTCAGCCATCGCGCGCCCCCGAGG  
 CCCCTGCCGCGCAGGTGCGAAAGACCTCCAGGCCACTCCGGCAGAGAGCGTGAAGGGGGGGGCCCTGGGAG  
 GGGCGGGGGCGGGGGTGTGCTAGGCGACCACGCTCTCCGCCAGACCGGCTACTTCTCCGCAGGGGGCG  
 CCATGGGCCGAGCCAGGCTCGCGGGCCTCCGATCGGCTCTTTTCCGACTTCTTCCCTCTGCGGGCGGGT  
 GGGGCACGCCCGTGACGTACAGGAGGGCGGGGCAGCGCGGCTGCCGGGTGCCGGAGGCGCCATTGGAGCCG  
 GCTTGGCTTGGGAGCCGTAGCTGAAGAGTTGGATC

Various transcription factor binding sites:

Ebox

CAATAA

AP-1

TATA

E4BP4

GC box

E2F

FIGURE 3A

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CCACATTCACTGTGCAAGT**CGTGGGG**AAATACAGATGAATAAAGGCTTCCTTGTTATTCTCAAGGAATGTATG  
 GTTTTGAAGCACAGTTAGACATATATTCAAATTACAGCTTCCTCCTTTAAACACTAATATTCCAAGGCACAC  
 TCAATGTTTTAAAGGATCACAGAGTGACTACCAAAGCACGTAGCAAAACCCTACTAAGAGAGGTGTGTTTAA  
 ATGACTACCCAAGGGACATACTTTTCAAGTCTTCTAATCGTTCACCTTTGGATCTGTTTAT**AGCAGA**AAGAAA  
 ACAATTTACTTGATGCTCTTAGGTCCCCTTAAAAAATAACCATCGTGAAGTGGCTTTTCATGTCTTTGGCTTT  
 TATTGAACATAGAAACAGCCATGCAAGCGGTCTTAAAGGCTTTATTACATCATTGTTTCCTAATAAAGTCATG  
 ACAGTCTACCTTTGGAATTAAGTGATACACAAAATGATGGTCTGTGTCTCTGGTGAAGTGGTTCCATT**CAG**  
**ATAACACCTATT**CATCATGACTATGGTTTTCATTTTTCTTTAGCCTTCAAGAAGCTCAGAACTGAATTTTAAAT  
 TCAGTCATTTACCACCAAGATAATTGTGAGTTTTTTTTTTTTTAAAAAACTCTAATGTTTTATTTCTAGATTT  
 TAGTTTAAACCACGTTACATCTATATTGACAATAAATGTGCTAAAATAAACTTAACATGGGTAATGTGCCTAG  
 GGAGGCTTGAATCCCAATATGGCAAAACAAACAGAAAACCAGCAATTTGGTATGCTGTGCTGTCTTATATTTT  
 ACAGAAATAAATGTGAAGTATATGACCTATGTTATGATCTTTAAAGAGTTTGTAGAAACGGAAGAGGACTCA  
 GAGAAAAGCAACCAAAACGAACAGGAGGAGAAGGAAGAAGAGGCGGAGAAGGAGGAGGAAGATTGGAGATAGT  
 ATGCCCTTTATTGTCTA**AGCACA**AGTGTGTTGAAGTACTGTGACAGCCATCTTGGCAATTAGAAATGAGTA  
 TCTAAATTTGGACTGTTCTAGAAAAATCTGTTACAGAGATAATGTTAAAGCCAGATTACAGGAATCACAGCC  
 ACTAATATACAAATAATTACAGAAAGGCTTTGAATGTGGAGGTGTTGTTCTGATGACTCTATTGATGTATTTG  
 AAAGCACTGGAGTTAC**TCCCAGG**AAAATTACAACCAGAGTTCCTTAAAGCAGAACCTCCCTGTTTTCTATTC  
 ATTTGCTGAATATCAAAGCATTTTCCAGCCAACAGTACGGCAGAGAATCTCGATTGACCCGAGGAAGAACCA  
 GTCTGAGTTGCCAAGTCGGATGAGGAA**GCCA**ACTGCCAAATCAGCTATC**AGGGGAAGTTCCTA**ACACCCTGG  
 TATCACTTGGTTAGACAGTTTAAGCCAGTGAGTTTTCTGGTAGGATTGTTTTTTGGTTTTTTTTTTTTTCTTTT  
 TAATCCTTTTTTGCGTAACACATATCCATTTAGTGATCCGATTAATGGCCGGGTCACTAT**TCCCCAAA**ATACA  
 TTCATTTGTAACACACCT**TCCCCTT**CCAATTTTGCCCATGATTGCACAGGGTTCGTGGATTAAATAAAGTCTAT  
 CCTTAGATAACCCGGTTATGTTTGTGAAGATTTCTGGGACTCAAGACAAAATCCTTTGATAACCCTTTAGAA  
 TCACCTCTTTTATCGGTACGCGGCCAAGGGAACCCGGGTCTCCAGGGTCTCTCCCA**TCCCCCGCCCCGAG**  
 GCCCTGCGG**CGCAGGTGCG**AAAGACCTCCAGGCCACTCCGGCAGAGAGCGTGAAGGGGGGGGCCCTGGGA  
 GGGGCGGGGGCGGGGGTGTGCTAGGCGACCACGCTCTCCGCCAGACCGGCCTACTTCTTCCGCAGGGGGCG  
 CCATGGGCCGAGCCCAGGCTCGCGGGCCTCCCGGATCGGCCCTTTTCCGACT**TTCTTCCCCCTCTGCGGGCGGT**  
**GGCGCACGCCCCGTGACGTCACAGGAGGCGGGGCCAGCGCGGCTGCCGGGTGCCGGAGGCGCCATTGGAGCCGG**  
**CTTGGCTTGGGAGCCGTAGCTGAAGAGTTGGATC**

Various transcription factor binding sites:

**MZF1**

**AML-1A**

**Sp1**

**E47**

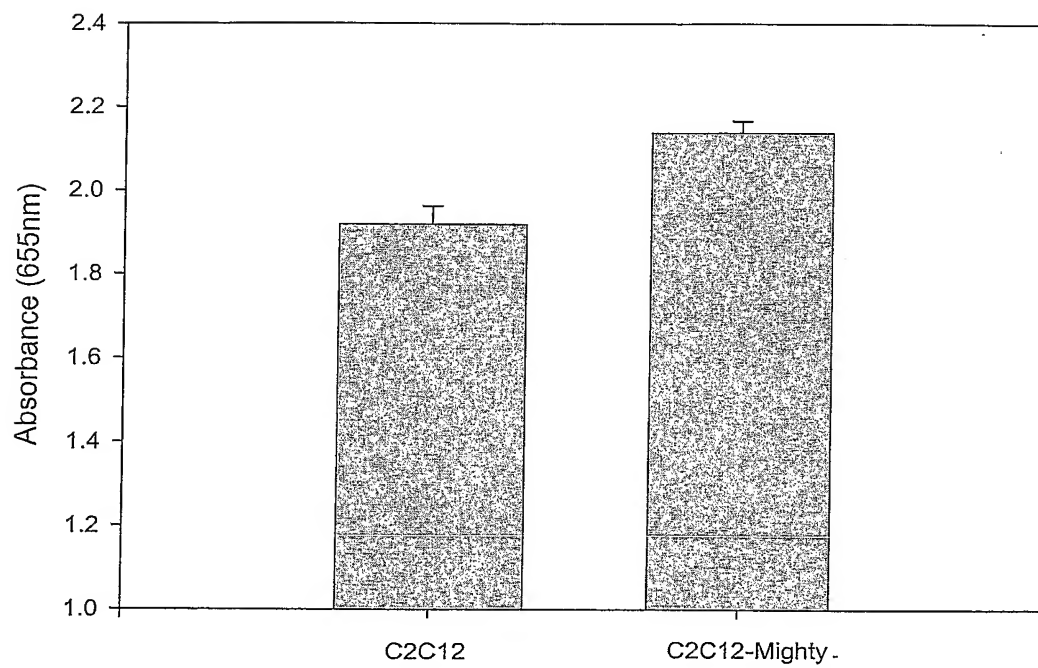
**MyoD**

**NF-kap**

**FIGURE 3B**

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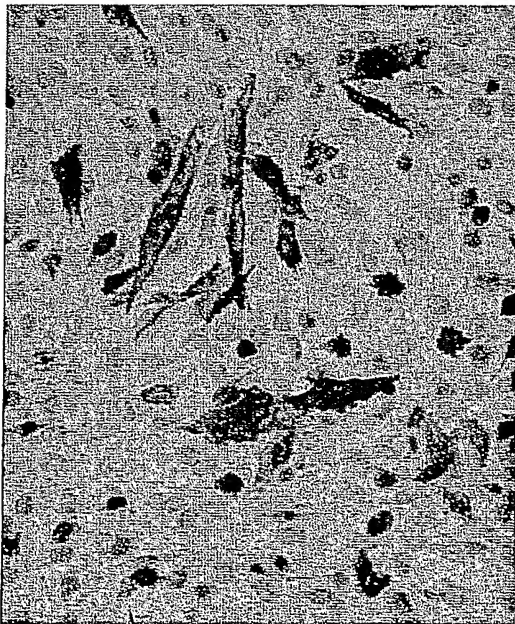
C2C12- Mouse Mighty Clone Proliferation Assay  
72 hrs Proliferation

**FIGURE 4**

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Mighty over expressing  
C2 Myotubes



Control C2 Myotubes

FIGURE 5

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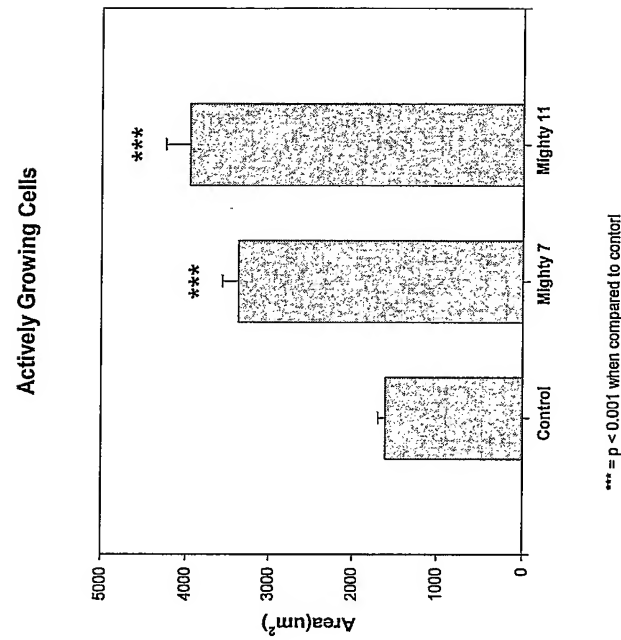


FIGURE 6A

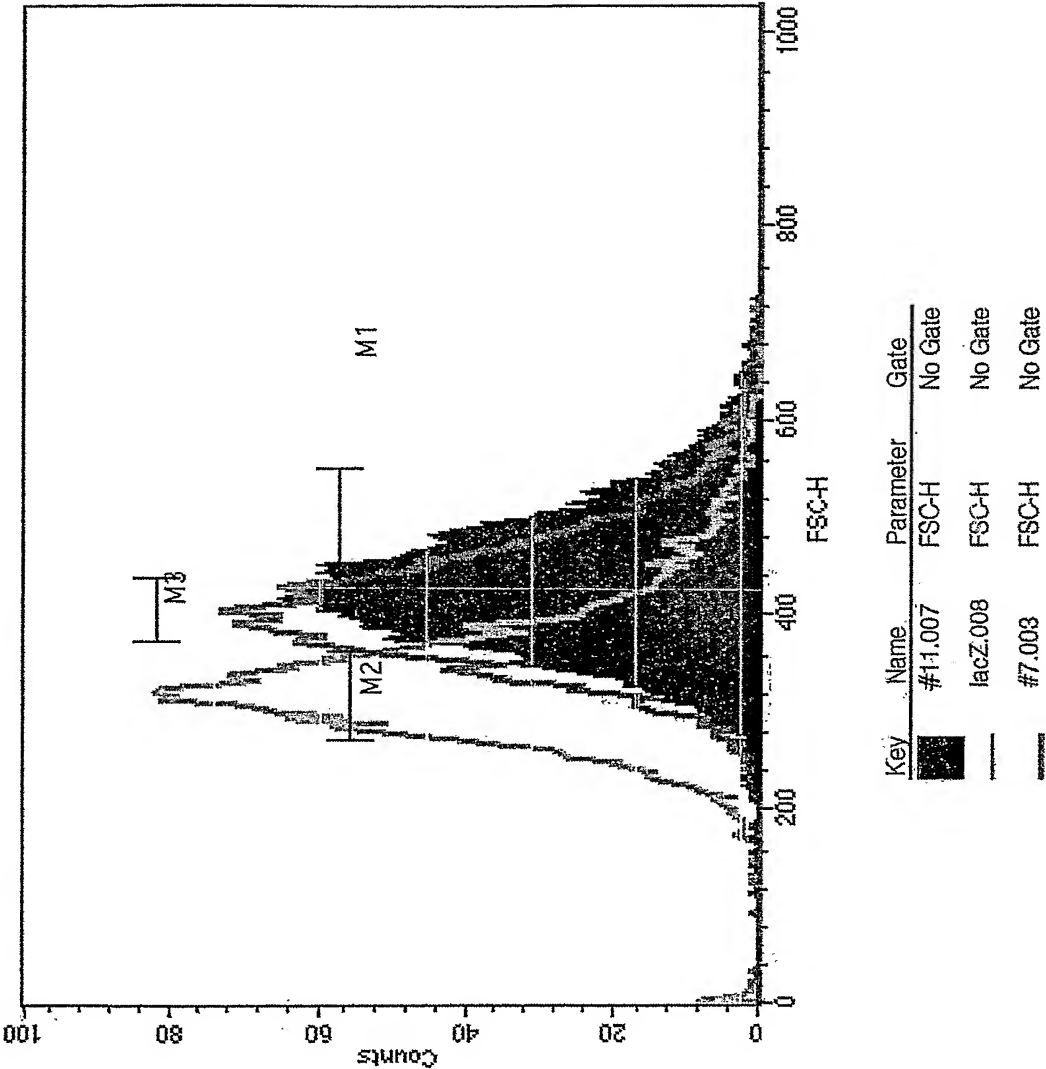
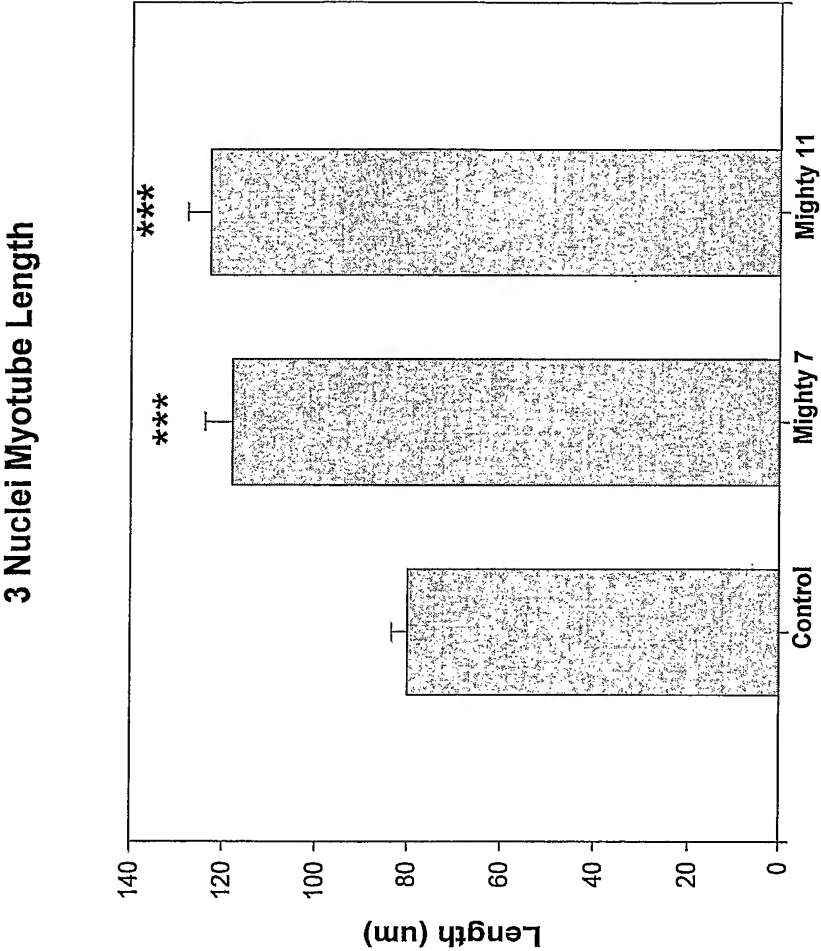


FIGURE 6B



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\*\*\* = p < 0.001 when compared to control

**FIGURE 6C**

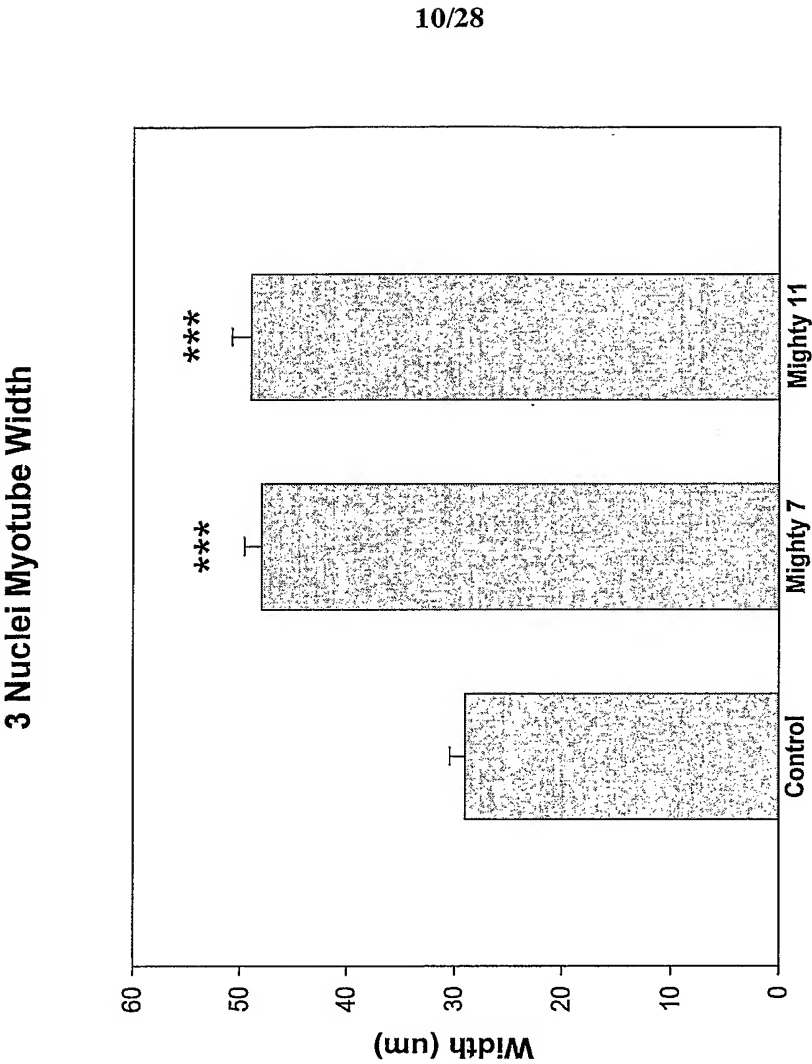
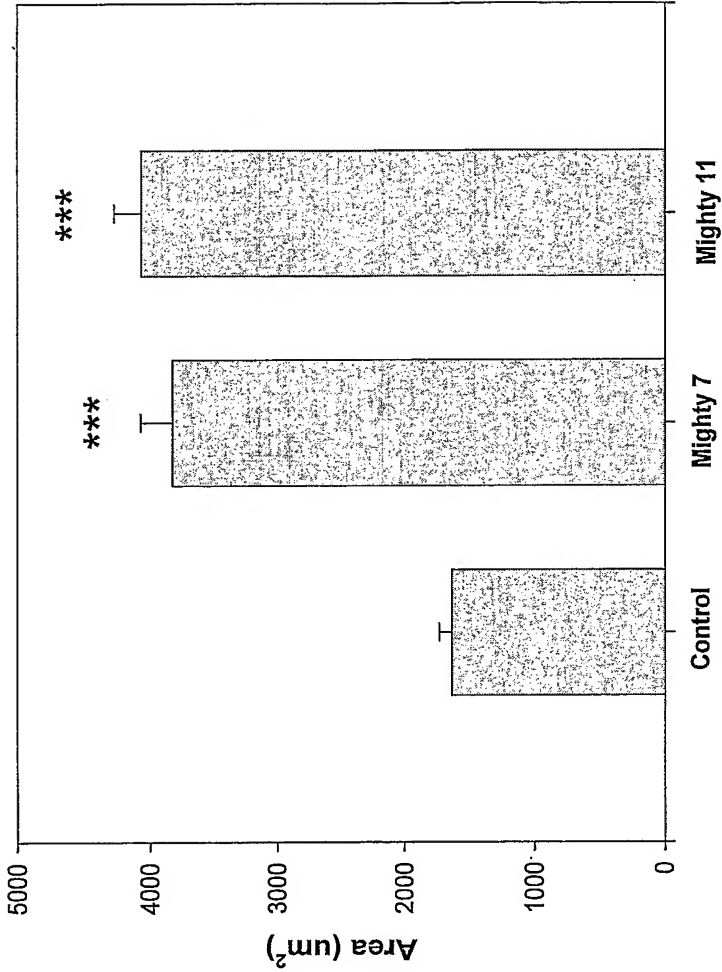


FIGURE 6D

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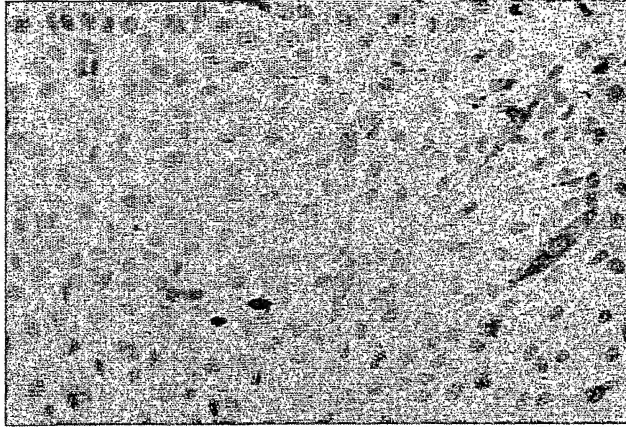
3 Nuclei Myotube Area



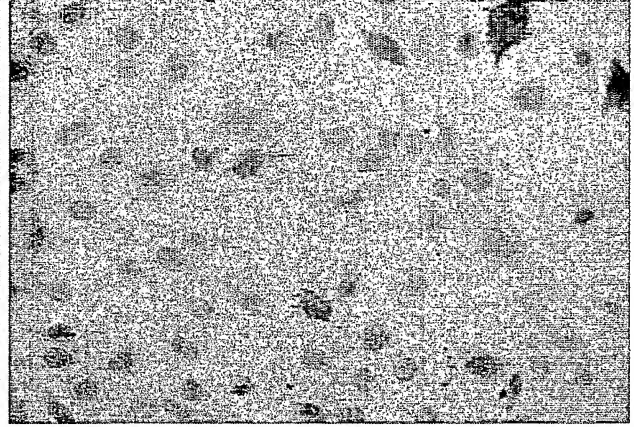
\*\*\* = p < 0.001 when compared to control

FIGURE 6E

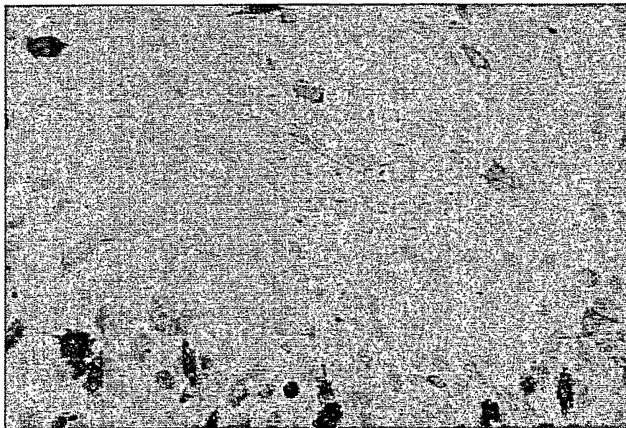
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C2C12 - 48 hours differentiation



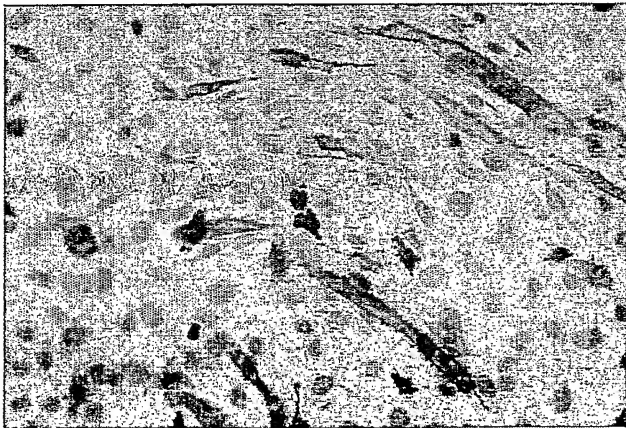
Clone 11 - 48 hours differentiation



C2C12 - 60 hours differentiation



Clone 11 - 60 hours differentiation



C2C12 - 72 hours differentiation



Clone 11 - 72 hours differentiation

FIGURE 7A

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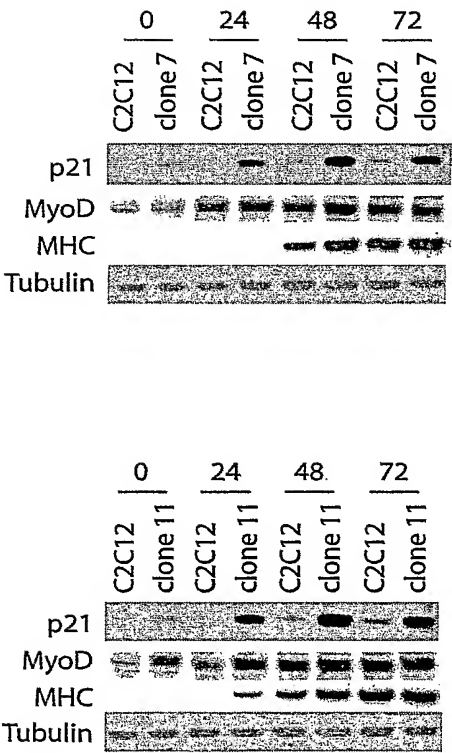
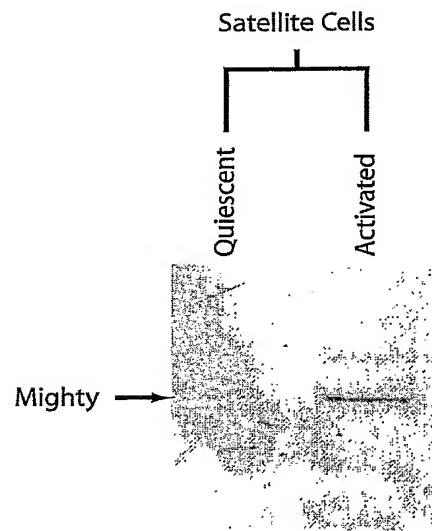


FIGURE 7B

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**FIGURE 8**

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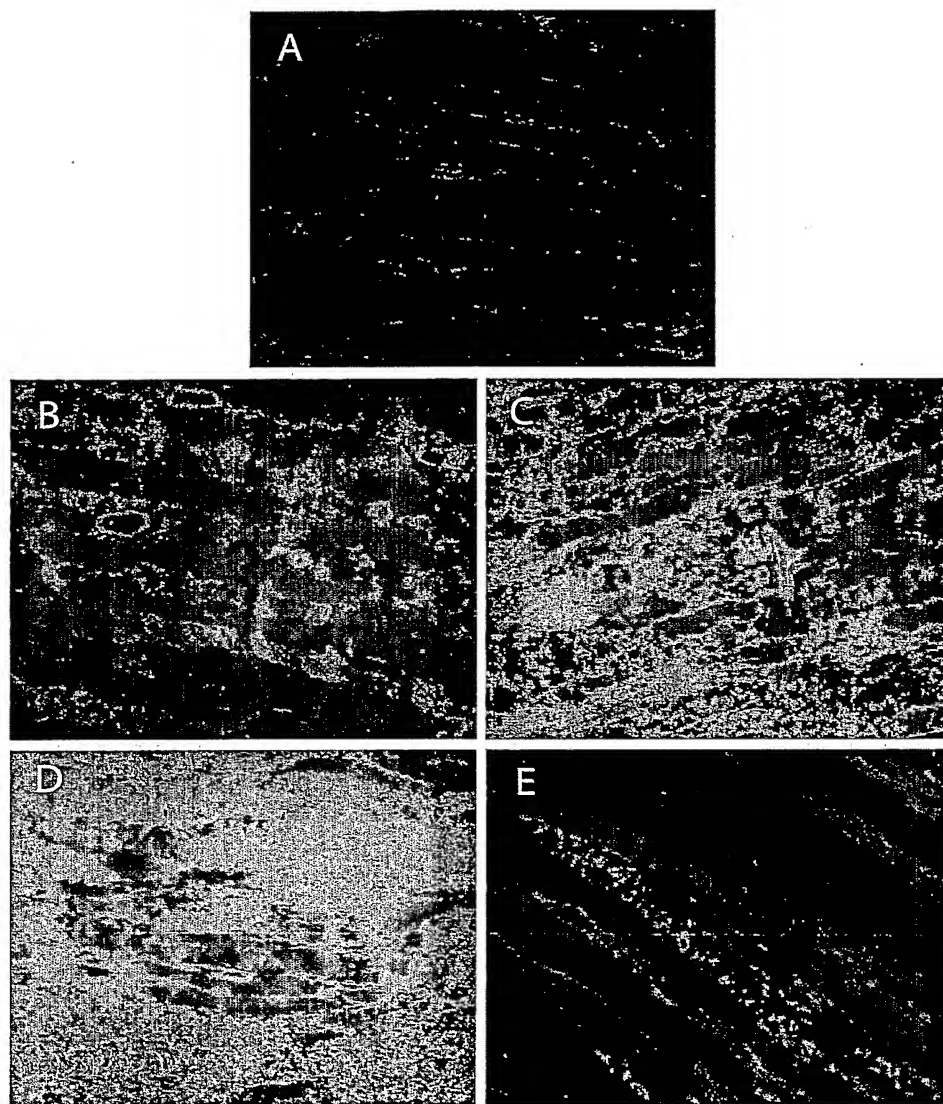


FIGURE 9

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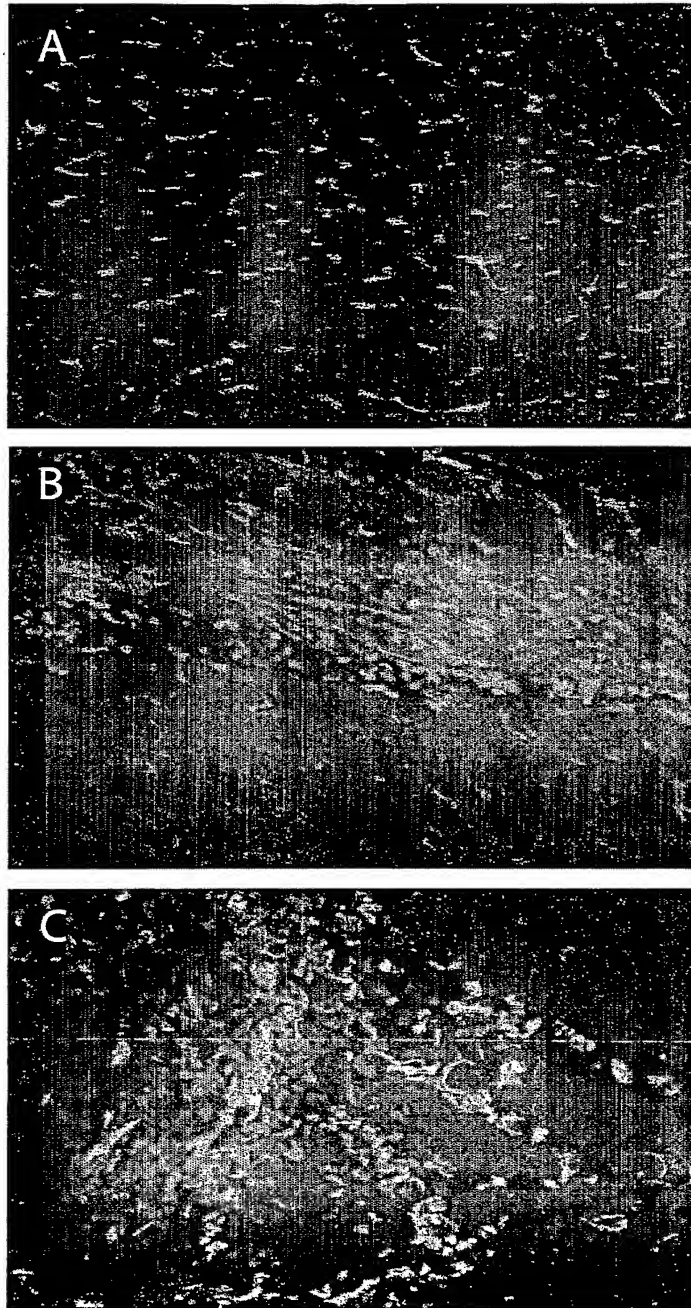
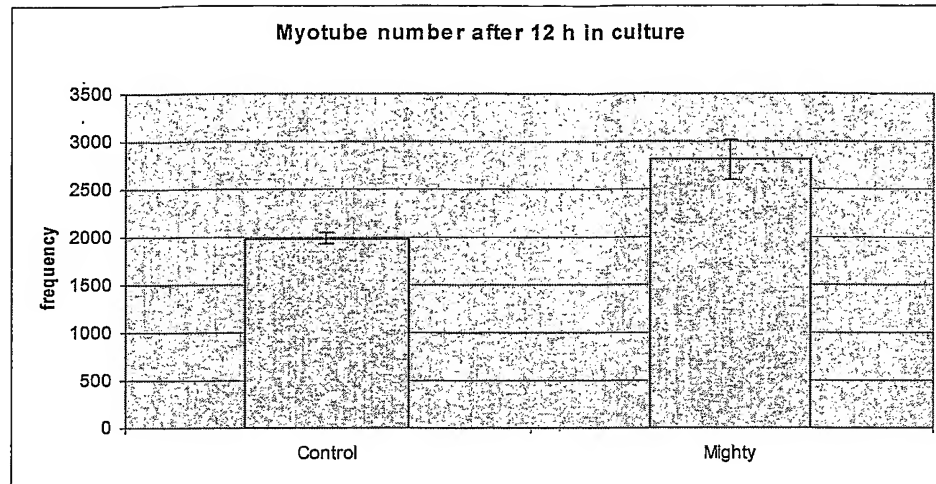


FIGURE 10



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**FIGURE 11**

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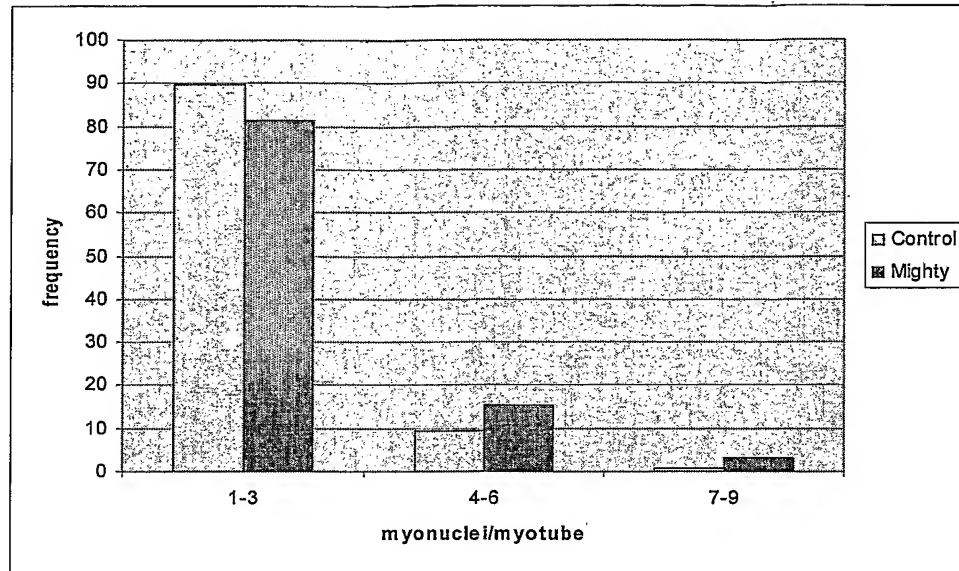


FIGURE 12A

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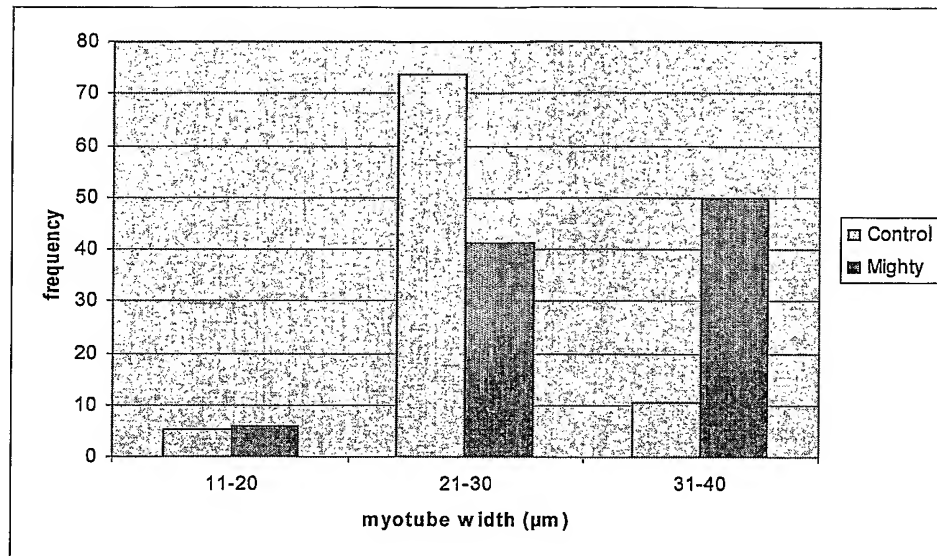


FIGURE 12B

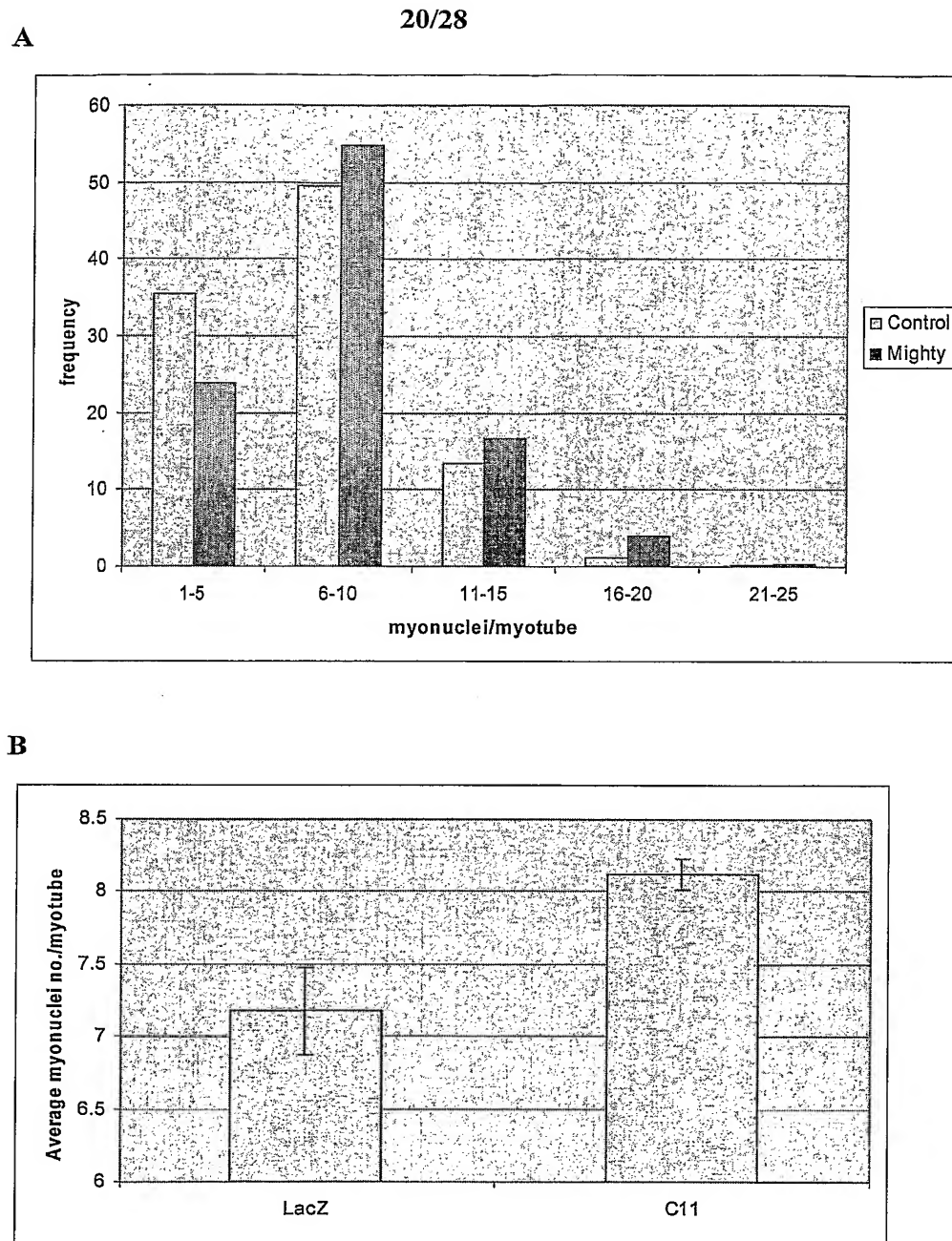


FIGURE 13

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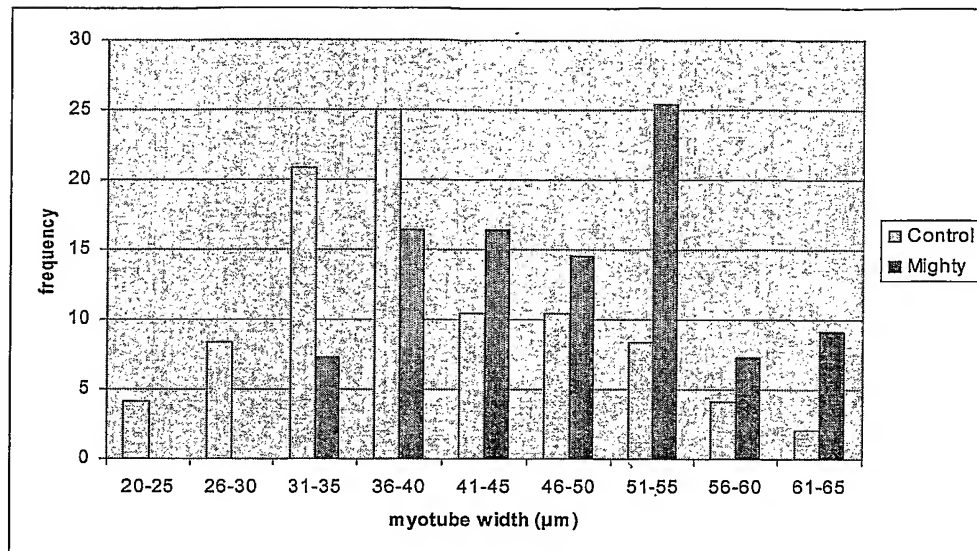


FIGURE 14

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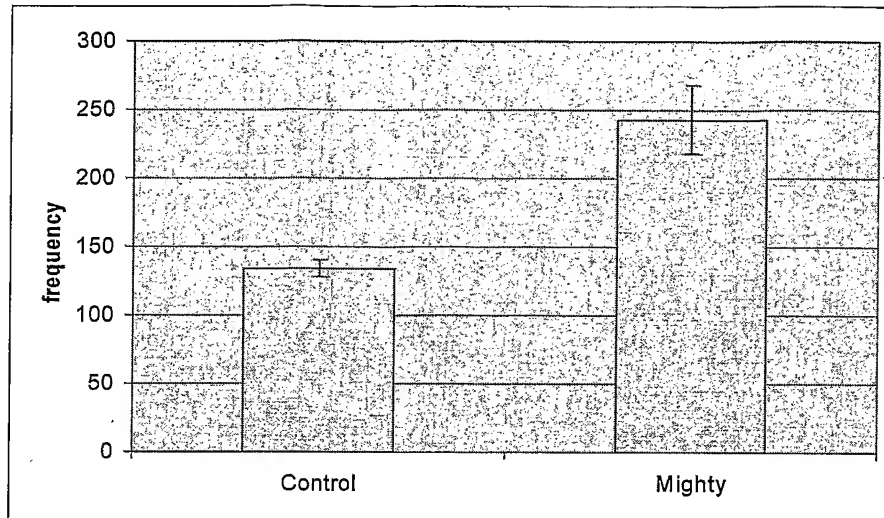
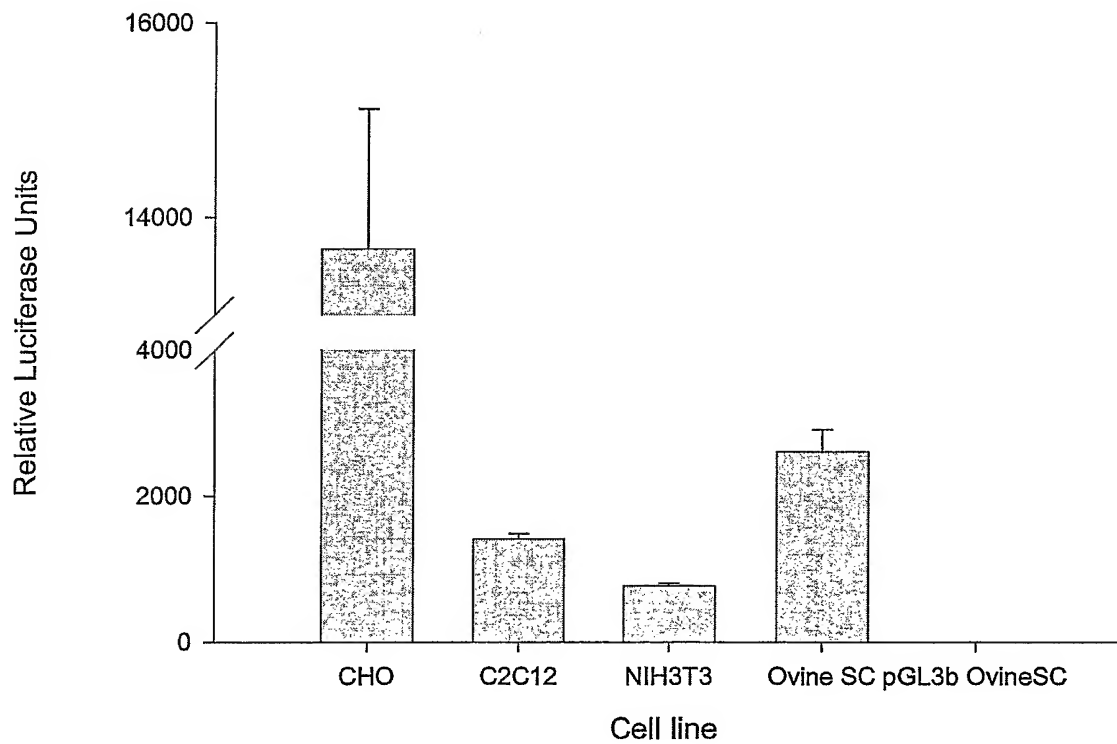


FIGURE 15

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Luciferase Activity of the 1kb mighty promoter in different cell lines



**FIGURE 16A**

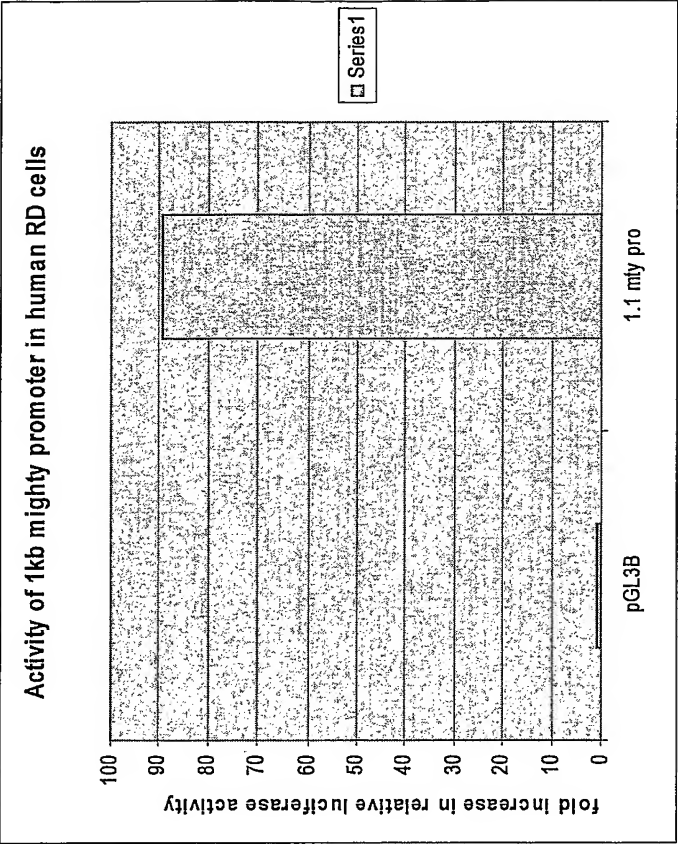
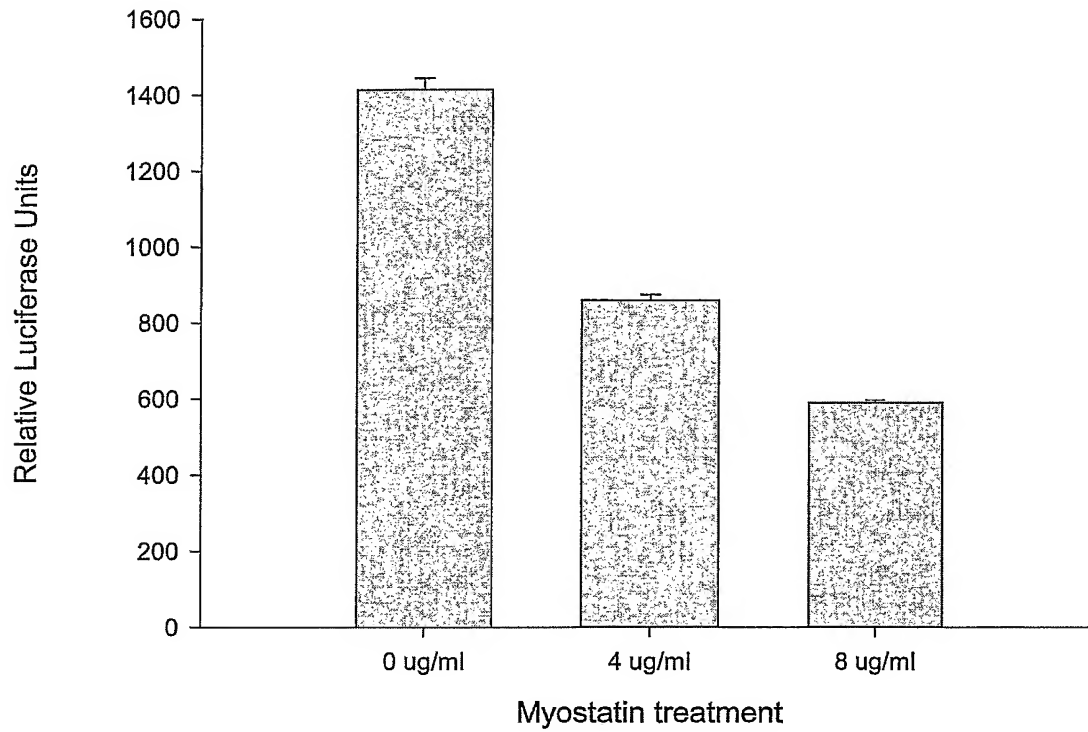


FIGURE 16B



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Luciferase Activity of the 1kb mighty promoter in response  
to increasing myostatin concentrations

**FIGURE 17**

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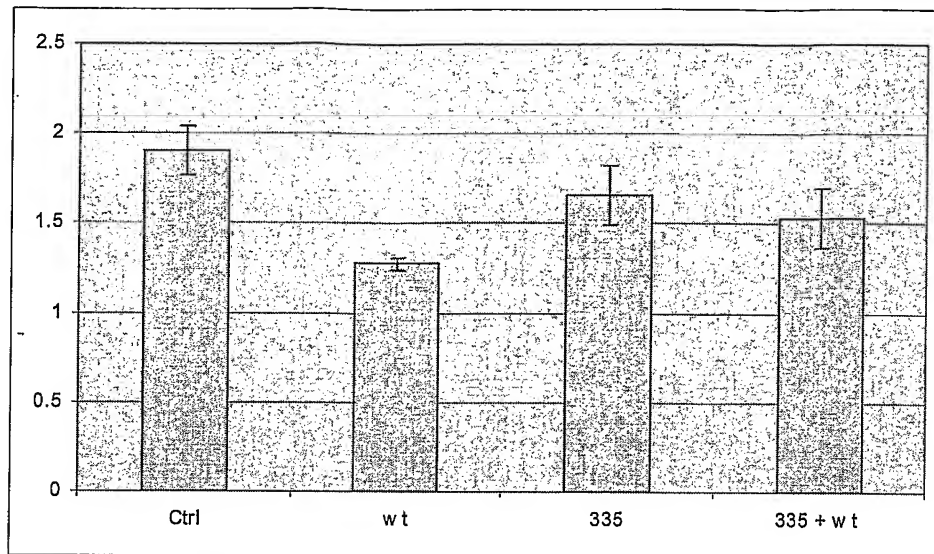
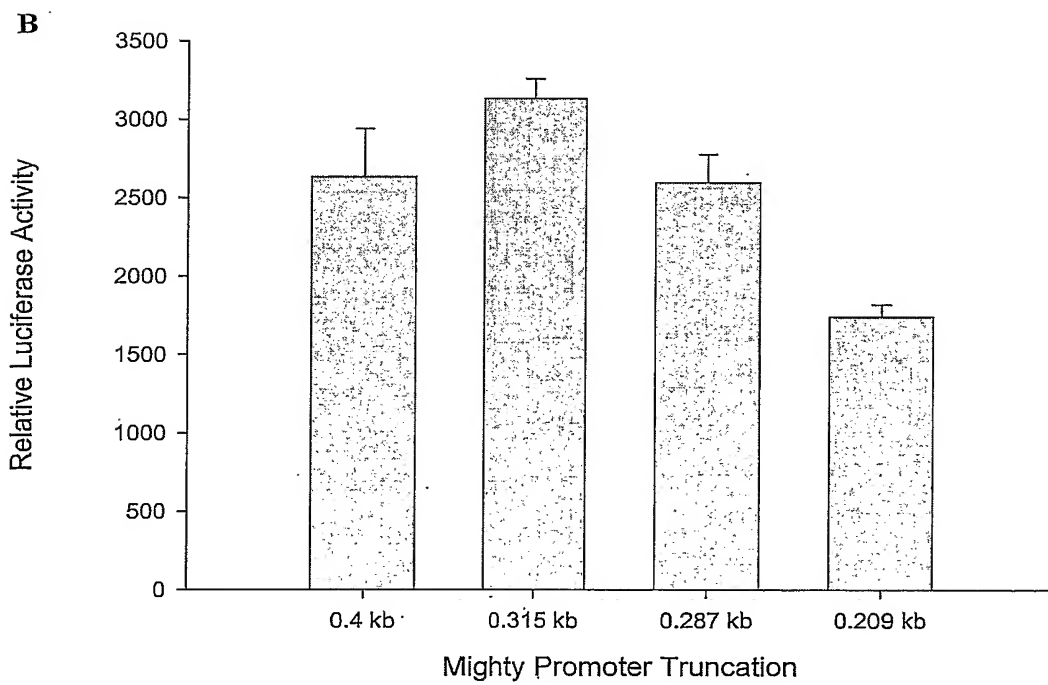
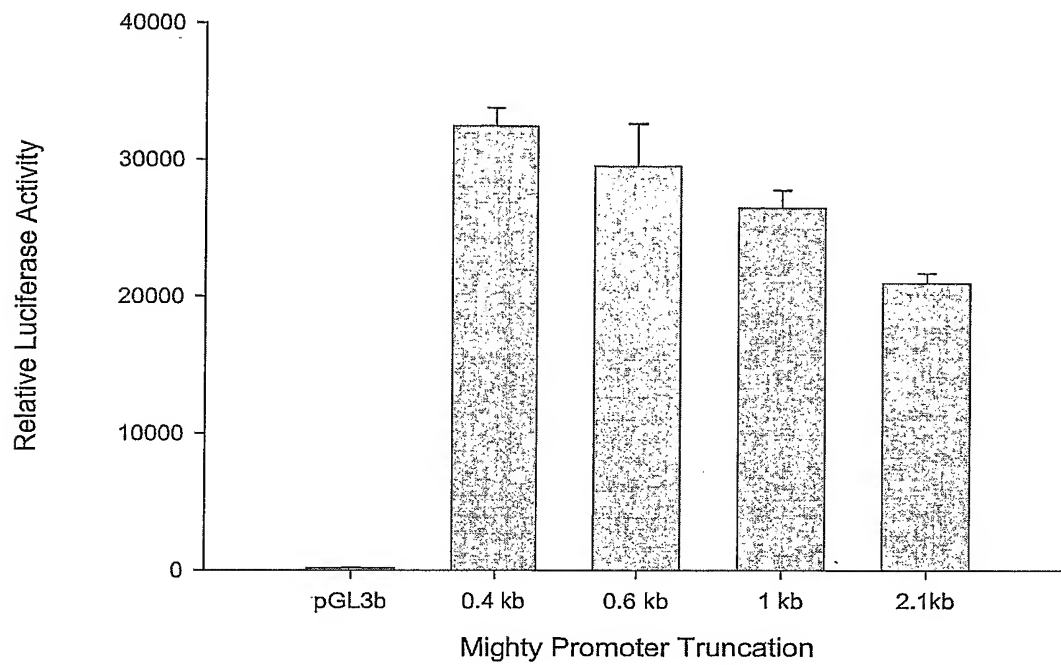


FIGURE 18

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**A** Mighty Promoter Truncations Normalised to beta-Gal Activity**FIGURE 19**

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FIGURE 20